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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,595	11/02/2004	Michael Grass	260382US0XPCT	5262
22850	7590	03/13/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER CHOI, LING SIU	
			ART UNIT	PAPER NUMBER

1713

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/13/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/13/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

**Office Action Summary**

Application No.

10/511,595

Applicant(s)

GRASS ET AL.

Examiner

Ling-Siu Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :11/2/04, 6/12/06, 11/8/06.

**DETAILED ACTION**

1. This application is a national stage application of International Patent Application No. PCT/EP03/04386, filed on April 26, 2003, and claims priority to German Patent Application No. 102 25 565.2, filed on June 10, 2002.

2. This Office Action is in response to the Preliminary Amendment filed 11/02/2004. Claims 1-5 and 13 are drawn to a catalyst for the hydrogenation of aromatic compounds to the corresponding alicyclic compounds and claims 6-12 are drawn to a process for the catalytic hydrogenation of an aromatic compound with one or more hydrogen-containing gases on the catalyst.

***Claim Analysis***

3. Summary of claim 1:

A catalyst for [aromatic compounds $\Rightarrow$ alicyclic compounds], comprising	
	at least one <u>metal of the eighth transition group</u> on or in a support material
	wherein the <u>support material</u> has
	an average pore diameter = 25-50 nm
	a specific surface area > 30 m <sup>2</sup> /g

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claim 2 (1)	over 90% of the total pore volume of the support materials is comprised of meso- and micropores with a diameter of from 0.1 to 50 nm
claim 3(1)	The support material comprises activated carbon, silicon carbide, aluminum oxide, silicon oxid, aluminosilicate, titanium dioxide, zirconium dioxide, magnesium oxide, zinc oxide, or mixtures thereof
claim 4(1)	<b>further</b> comprises at least one metal of the <u>first transition group</u>
claim 5(1)	<b>further</b> comprises at least one metal of the <u>seventh transition group</u>

Summary of claim 6:

A process for the <u>catalytic hydrogenation</u> of an aromatic compound with one or more hydrogen-containing gases on a catalyst	
the catalyst:	at least one metal of the <u>eighth transition group</u> on or in a <u>support material</u>
	wherein the support material has an average pore diameter = 25-50 nm a specific surface area > 30 m <sup>2</sup> /g,
the aromatic compound:	aromatic monocarboxylic acids or their alkyl esters or aromatic polycarboxylic acids or their anhydrides, half esters, or full esters

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Brunner et al. (US 6,284,917 B1).

Brunner et al. disclose a process to hydrogenate a benzenepolycarboxylic acid, comprising contacting the benzenepolycarboxylic acid with a hydrogen-containing gas in the presence of a catalyst, wherein **the catalyst** comprises at least one metal of transition group VIII (ruthenium, palladium and/or rhodium) and optionally at least one metal of transition group I or VII of the Periodic Table as active component(s) and a support which is calcined at from 200 to 600°C and has about 50 to about 95% of mesopores with a pore diameter of from about 2 to about 50 nm and a surface area of from about 50 to about 500 m<sup>2</sup>/g, more preferably from about 200 to about 350 m<sup>2</sup>/g, and in particular from about 250 to about 300 m<sup>2</sup>/g (catalyst 2 - col. 5, lines 5-16 and 29-38; col. 6, lines 1-23). Brunner et al. further disclose that the support is activated carbon, silicon carbide, aluminum oxide, silicon dioxide, titanium dioxide, zirconium dioxide, magnesium oxide, zinc oxide or mixtures thereof (col. 6, lines 29-36). Thus, the present claims are anticipated by the disclosure of Brunner et al.

6. Claims 1, 3, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayes et al. (US 4,079,092).

Hayes et al. disclose a process for producing a cycloparaffinic hydrocarbon, comprising contacting hydrogen and an aromatic hydrocarbon in a catalytic composite comprising a porous carrier material containing about 0.01 to about 2 wt.% platinum or palladium, about 0.01 to about 2 wt.% rhodium, about 0.05 to about 5 wt.% cobalt, and about 0.1 to about 3.5 wt.% halogen uniformly dispersed throughout the porous carrier material (claim 1). Hayes et al. further

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disclose that the porous carrier material is a crystalline aluminosilicate and has a surface area of about 25 (100) to about 500 m<sup>2</sup>/g and a pore diameter of about 20 to about 300 Å (col. 4, lines 36-39; col. 5, lines 5-11; claim 3 ). Thus, the present claims are anticipated by the disclosure of Hayes et al.

7. Claims 1, 3, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hahnfeld et al. (US 6,350,820 B1).

Hahnfeld et al. disclose a process to hydrogenate the vinyl aromatic polymer block segments of the copolymer in the presence of a metal catalyst supported on an inorganic substrate, wherein the inorganic substrate is a silica, alumina or carbon and has at least 98 percent of the pore volume defined by pores having pore diameters greater than 300 angstroms and a surface area between 10 and 100 m<sup>2</sup>/g, preferably between 15 and 90 with most preferably between 50 and 85 m<sup>2</sup>/g and wherein the metal catalyst comprises metal capable of catalyzing hydrogenation of the polymer, which is nickel, cobalt, rhodium, ruthenium, palladium, platinum, other Group VIII metals or mixtures thereof (col. 5, lines 22-38; col. 6, lines 1-16). Thus, the present claims are anticipated by the disclosure of Hahnfeld et al.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

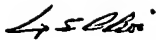
If attempt to reach the examiner by telephone are unsuccessful, the examiner's

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supervisor, David Wu, can be reach on 571-272-1114.



LING-SUI CHOI  
PRIMARY EXAMINER

March 5, 2007